

11-A

Notice of Allowability	Application No.	Applicant(s)	
	10/713,514	ANDERSON ET AL.	
	Examiner	Art Unit	
	John H. Le	2863	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to Applicant's amendment filed 04/25/2005.
2. ☒ The allowed claim(s) is/are 12,20,22-27 and 29-32.
3. ☒ The drawings filed on 14 November 2003 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|---|--|
| 1. <input type="checkbox"/> Notice of References Cited (PTO-892) | 5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 6. <input type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date _____. |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date _____ | 7. <input type="checkbox"/> Examiner's Amendment/Comment |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9. <input type="checkbox"/> Other _____. |

Response to Amendment

1. Applicant's amendment filed 04/25/2005 has been entered and carefully considered.

Claim 25 has been amended.

Claims 1-11, 13-19, 21, and 28 have been cancelled.

Claim 32 has been added.

Reasons for Allowance

2. Claims 12, 20, 22-27, 29-32 are allowed.
3. The following is a statement of reasons for the indication of allowable subject matter:

Regarding claim 12, none of the prior art of record teaches or suggests the combination of an electromagnetic tracking system comprising a magnetic field generating unit and a field sensing unit being arranged to generate and to sense, respectively, an electromagnetic field in an arena of interest, and wherein at least one of said units is movable, signal measurement and conditioning circuitry connected to said units to sample and digitize signal data for the field generating and field sensing units, a distorter having a known structure disposed at a selected location in the arena of interest, and a processor operative on the sampled and digitized signal data to determine relative coordinates and orientations of said field generating or field sensing unit, said processor modeling the distorter and the generating and sensing units to generate modeled signal data and fitting said modeled signal data to measured signal values to determine coordinates and orientations of said field generating and field

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sensing units. It is these limitations as they are claimed in the combination with other limitations of claim, which have not been found, taught or suggested in the prior art of record, that make these claims allowable over the prior art.

Regarding claim 24, none of the prior art of record teaches or suggests the combination of an electromagnetic tracking system comprising a magnetic field generating unit and a field sensing unit being arranged to generate and to sense, respectively, an electromagnetic field in an arena of interest, and wherein at least one of said units is movable, signal measurement and conditioning circuitry connected to said units to sample and digitize signal data for the field generating and field sensing units, a distorter having a known structure disposed at a selected location in the arena of interest, and a processor operative on the sampled and digitized signal data to determine relative coordinates and orientations of said field generating or field sensing unit, said processor modeling the distorter and the generating and sensing units to generate modeled signal data and fitting said modeled signal data to measured signal values to determine coordinates and orientations of said field generating and field sensing units, said processor models said distorter as a ring model. It is these limitations as they are claimed in the combination with other limitations of claim, which have not been found, taught or suggested in the prior art of record, that make these claims allowable over the prior art.

Regarding claim 25, none of the prior art of record teaches or suggests the combination of an electromagnetic tracking system comprising a magnetic field generating unit and a field sensing unit being arranged to generate and to sense,

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respectively, an electromagnetic field in an arena of interest, a distorter having a known structure disposed at a selected location in the arena of interest, and a processor modeling the generating and sensing units to generate modeled signal data and fitting said modeled signal data to measured signal values to determine coordinates and orientations of said field generating and field sensing units. It is these limitations as they are claimed in the combination with other limitations of claim, which have not been found, taught or suggested in the prior art of record, that make these claims allowable over the prior art.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Contact Information

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to John H Le whose telephone number is 571-272-2275. The examiner can normally be reached on 8:00 - 4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John E Barlow can be reached on 571-272-2269. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR.

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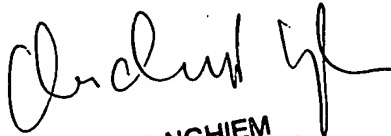
Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

John H. Le

Patent Examiner-Group 2863

April 28, 2005



MICHAEL NGHIEM
PRIMARY EXAMINER